

HONORS IN RESEARCH PROGRAM (Revised August 2019)

The **Honors in Research Program** is an optional research training opportunity that enables Medical Student Summer Research trainees to extend their summer research experience forward throughout their education program with the goal of: 1) exploring additional aspects of their project that potentially may generate new data or add knowledge to their investigation, and 2) further enhancing their overall research exposures. Students who satisfactorily complete the Honors requirements will be recognized at graduation with the **M.D. with Honors in Research** on their diploma, and with **Honors in Research** on their transcript.

Who is eligible? The Honors option is open to MCW medical students who participated in the formal Medical Student Summer Research Training Program for 8 -11 weeks, supervised by MCW faculty investigators. However, participation in the Medical Student Summer Research Training Program alone does not automatically guarantee approval for the Honors program.

Students participating in research programs away from MCW or outside the auspices of the Medical Student Summer Research Training Program are not eligible to apply.

What are the requirements? The Honors in Research is a two-tier program consisting of Honors in Research “Thesis” and Honors in Research “Manuscript.” Student will have one of two Honors in Research options, submit a thesis **or** a manuscript. This option needs to be indicated when they submit the project for Honors in Research consideration. A letter of support from the mentor is also needed as part of the Honors in Research approval process. Once the Honors in Research application is approved for one option, the student can change the option (thesis to manuscript or manuscript to thesis). However, the final decision of thesis or manuscript must be communicated to Mrs. Chamia Gary by end of M3 year.

For the thesis option, a thesis will be required, which will be reviewed by select reviewers and members of the MSSRP advisory committee. Students must: 1) complete a total of 16 weeks of *mentored research training on one project, including the weeks spent during the summer research program, and 2) submit an approved research thesis by November 1 of the M4 year.

For the manuscript option, the criteria for the medical student authorship remains first or joint first author. No thesis is required for this option. Students must: 1) complete a total of 16 weeks of mentored research training on one project, including the weeks spent during the summer research program; and 2) submit an original manuscript with the student as first author or joint first author with documentation indicating submission in a peer-reviewed journal by November 1 of the M4 year. Reviews are not counted as manuscripts for this option. This includes systematic reviews or comprehensive reviews of any type.

For manuscripts submissions, please note that publications from non-peer reviewed, pay-to-publish, predatory and pseudo-journals deemed by NIH (NOT-OD-18-011) will not be accepted. Reviews are not considered as manuscripts for this criterion.

Finally, Honors in Research submitted for thesis or manuscript option will be considered for Honors in Research with Distinction category. There is no additional application for this but will be determined by the qualification criteria listed next. To attain this status, in the thesis option, scores from reviewers should be in the Exceptional to Outstanding range (NIH), and in the

manuscript option, the acceptance of publication in the submitted journal is necessary along with scores in the Exceptional to Outstanding range (NIH) during review. In addition, concurrence with the Director and MSSRP advisory committee members will occur for final approval of Honors in Research with Distinction.

In case of submitted thesis, the MSSRP advisory committee members or appropriate faculty reviewers will review the content of the thesis to determine if all objectives of the training program is met. Further, a mentor letter clearly indicating the role of the student in preparation of the thesis is needed.

In case of a manuscript that is rejected post submission, the committee will determine whether the Honors in Research-Manuscript will be awarded based on the review of the work in the manuscript.

In case of an accepted manuscript, the MSSRP advisory committee members or appropriate faculty reviewers will review the content of the published manuscript to determine if all objectives of the training program is met. Further, a mentor letter clearly indicating the role of the student is required as part of this submission.

For both options above, the Honors project must be an extension of, or very closely related to, the original summer research project. Additionally, Honors candidates must maintain a satisfactory academic record throughout the medical education program. The preceptor/mentor must be a full-time MCW faculty member and must provide a letter of support for the applicant at the time of application and a letter verifying the completion of the training at the time the Honors thesis or manuscript is submitted (see additional information below).

When can I complete the additional lab time? Approved honors candidates who complete 11 weeks of research during the summer may complete the additional training time by taking the optional *4-week, graded Honors in Research elective during the M3 year or in the months of July or August only of the M4 year, plus one week of personal time or noncore Pathways time. For students completing only 8 or 10 weeks of training during the summer, the additional 6 or 8 weeks of required lab time may be completed in a combination of the 4-week Honors in Research elective, as described above, plus noncore Pathway time and personal time. The student must provide a plan for completing the time as part of the Honors proposal.

Time spent on research following the completion of the summer program (including noncore Pathway time), but prior to obtaining approval, will not count retroactively toward the 16-weeks honors requirement; therefore, students are advised to apply for Honors as soon as possible following the conclusion of the summer research training. Time spent writing the thesis or manuscript does not count toward the 16-week requirement.

* Enrollment in the M3 or M4 Honors elective is subject to the policies of the Registrar's Office.

The learning activities are determined by the research preceptor and the student. The preceptor completes the standard third-year evaluation currently used for graded electives. Students are graded on the standard five-point grading scale.

What are the application requirements? The Honors application must include the following:

For the original project:

- Explain the background and scientific significance of the original project.
- State the hypothesis and original specific aims.
- Briefly explain how they were achieved (methods).
- Briefly describe the results of the original project.
- Briefly describe your role on the research project.
- How many weeks were completed during the summer?
- Did you publish or present this work?

For the Honors project:

- Explain the background and scientific significance of the Honors project.
- State the new hypothesis and the new specific aims.
- Discuss how the Honors project extends or enhances the original project.
- Briefly describe the anticipated methods.
- Briefly explain your role on the extended project. (What are the specific plans with timelines for publishing the findings from this study?)
- Do you anticipate publishing or presenting as a result of the extended research? (What is necessary to accomplish during the honors stage that will facilitate a first author paper?)
- Explain how/when the additional training time will be fulfilled (e.g. research elective, pathways time, on nights/weekends with specifics). (Explain how you will spend your time (e.g. research elective.....copy from above...) to facilitate publishing/submission of paper? Include details of what type of journal this study will be submitted to for publication?)

For the Faculty Preceptor/Mentor:

Preceptors must provide a letter of support demonstrating their willingness to mentor their Honors applicant throughout the added training and thesis or manuscript writing process. Mentor letter should highlight plans for paper submission and how this process will be managed with the student to ensure timely completion of this task. The letter should also clearly indicate the student's and preceptor's roles in the project, as well as how the student will be involved in the overall research environment and will interact with the preceptor.

Both the initial summer project and the subsequent research elective need to be reviewed and approved before the actual research is performed. No research completed after the summer project period will count for the Honors program unless the Honors application has already been approved. Completion of work not previously approved will not be considered as in compliance with this policy.

The submission of a thesis or manuscript encompassing the entire 16 weeks of research is required by November 1 of the M4 year. The actual writing of the thesis or manuscript is not considered to be a part of the 16 weeks of research time. The thesis or manuscript (submitted, accepted and rejected) will be reviewed by the Honors Committee and must be approved by February 1 of the M4 year in order for the Honors in Research to be awarded at graduation and noted on the diploma and transcript. The preceptor must verify that the student has completed the 16-week laboratory requirement upon submission of the thesis or manuscript.